

IN THE SPECIFICATION

On page 4 at line 16 before "around" delete --(possibly monolithically)--;  
after "body" delete --which may be monolithic perforated plate--.

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IN THE CLAIMS

For the convenience of the Office, all the pending claims are recited. Those claims not amended are printed in italics.

[Please amend the claims as follows:]

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29. (amended) A cellular X-ray grid for use in an X-ray imaging system with a radiation point source and an X-ray film, comprising:

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*Sub 1/27*  
*M 1*  
a [cellular X-ray] grid, including a [monolithic perforated] main part [monolithically] surrounded by a monolithic solid frame having a height corresponding to the height of the main part and a width selected to prevent bending of said grid and having at least one longitudinally-extending side, and a layer of radiation absorbent material completely covering and overlying said grid including said main part of frame, said main part including a top face and a bottom face, and a multiplicity of throughbores formed therethrough extending from said top face to said bottom face and defining cells to pass radiation emitted by said point source through said main part to form an X-ray image on an X-ray film underlying said grid, said cells each being [rectangular] a quadrilateral in cross-section and having [opposite sidewalls defining partitions extending between said top and bottom faces of said main part] a diagonal disposed at such a predetermined, [non-diagonal] oblique angle to said longitudinally-extending side of said main part so as to eliminate shadow images of the cells on an X-ray image on the film during exposure thereof to the radiation point source during movement of said grid[, and means for moving said grid] in a predetermined rectilinear direction, with said longitudinally-extending side of said main part being oriented parallel to said direction of movement.

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30. *A cellular X-ray grid according to Claim 29, wherein said cells have longitudinal axes extending normally to said top and bottom faces of said main part.*

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31. (amended) A cellular X-ray grid according to Claim 29, wherein said cells have longitudinal axes which radially extend toward [the] a focal point [of grid].

32. (amended) A cellular X-ray grid according to Claim 29, wherein said main part [and frame are] is [composed of] photosensitive glass.

5 33. (amended) A cellular X-ray grid, comprising a main part and having two opposite end surfaces and a peripheral surface, said main part consisting of a low-x-ray absorbing material being provided with a plurality of X-ray transmissive cells extending through said main part from one of said end surfaces to the other of said end surfaces and separated by a plurality of partitions each having side surfaces  
10 facing a respective one of said cells and also each having two opposite end surfaces, and an X-ray absorbing layer which completely covers all surfaces of each of said partitions so as to cover both said side surfaces and said end surfaces of each of said partitions.

M 1  
15 34. *A cellular X-ray grid as defined in Claim 33, wherein said main part has a frame adjoining said peripheral surface, said X-ray absorbing layer also completely covering said frame from all sides.*

35. (amended) A cellular X-ray grid as defined in Claim 33, wherein said  
20 low-x-ray absorbent material of said main part [and frame are] is [composed of] photosensitive glass.

N 2  
25 36. *A cellular X-ray grid as defined in Claim 33 wherein said X-ray absorbing layer completely covers all surfaces of said grid including said partitions and all surfaces of said frame.*

37. (amended) A cellular X-ray grid as defined in Claim 33, and further comprising two plates [arranged] connected to said main part at opposite end surfaces of said main part to cover and seal said main part [and connected with the  
30 latter], said plates being composed of a material capable of transmitting a long-wave component of X-ray radiation.

38. *A cellular X-ray grid as defined in Claim 37, wherein said cells are vacuum sealed.*

35 39. *A cellular X-ray grid as defined in Claim 37, wherein said cells contain a sealed gas.*

40. A cellular X-ray grid as defined in Claim 33, wherein said main part has two opposite longitudinal sides, said cells on a view from at least one of said end surfaces having two opposite sides each inclined relative to at least one of said longitudinal sides of said main part at one of the following Mattsson angles:

$\tan \alpha_1 = 1/3l + 3i$

$\tan \alpha_2 = 1/2l + 2i;$

$\tan \alpha_3 = 1/l + i;$

$\tan \alpha_4 = 2l + i/l + i;$

$\tan \alpha_5 = 3l + 2i/l + i;$

$\tan \alpha_6 = 2l + i/2l + 2i;$

$\tan \alpha_7 = 1 + i/3l + 2i;$

$\tan \alpha_8 = 1 + i/2l + i;$

$\tan \alpha_9 = 1 + i/l;$

$\tan \alpha_{10} = 2l + 2i/l;$

$\tan \alpha_{11} = 3l + 3i/l$

$\tan \alpha_{12} = 2l + 2i/2l + i$

wherein  $l$  is a thickness of each of said partitions in a direction perpendicular to sides of said partitions of two neighboring cells, and  $i$  is a length of said side of each of said cells; and  $\alpha_1 - \alpha_{12}$  is an angle of inclination of said sides of cells to the intended direction of motion which is parallel to the longitudinal side of said grid, and means for moving said main part in a predetermined rectilinear direction, said at least one longitudinal side of said main part extending parallel to said direction so that said opposite sides of said cells are inclined to said direction of movement at one of said Mattsson angles.

41. (amended) A cellular X-ray grid comprising a main part consisting of a photosensitive glass material and having two opposite surfaces and a peripheral surface and provided with a plurality of X-ray transmissive cells filled with gas or vacuum, said cells extending through said main part from one of said end surfaces to another of said end surfaces and separated by a plurality of X-ray absorbing partitions each having side surfaces facing a respective one of said cells and also each having two opposite end surfaces, said main part having two opposite longitudinal sides, and both opposite surfaces [are covering] being covered by plates for covering and sealing said cells and being composed of a material capable of transmitting a long-wave component of x-ray radiation.

42. A cellular grid as defined in Claim 41, where said cells on a view from at least one of said end surfaces having two opposite sides each inclined relative to at least one of said longitudinal sides of said main part at one of the following Mattsson-angles:

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$$\tan \alpha_1 = 1/31 + 3i$$

$$\tan \alpha_2 = 1/21 + 2i;$$

$$\tan \alpha_3 = 1/1 + i;$$

$$\tan \alpha_4 = 21 + i/1 + i;$$

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$$\tan \alpha_5 = 31 + 2i/1 + i;$$

$$\tan \alpha_6 = 21 + i/21 + 2i;$$

$$\tan \alpha_7 = 1 + i/31 + 2i;$$

$$\tan \alpha_8 = 1 + i/21 + i;$$

$$\tan \alpha_9 = 1 + i/1;$$

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$$\tan \alpha_{10} = 21 + 2i/1;$$

$$\tan \alpha_{11} = 31 + 3i/1$$

$$\tan \alpha_{12} = 21 + 2i/21 + i$$

wherein 1 is a thickness of each said partitions in a direction perpendicular to sides of said partitions of two neighboring cells, and i is a length of said side of each of said cells; and  $\alpha_1 - \alpha_{12}$  is an angle of inclination of said sides of cells to the intended direction of motion which is parallel to the longitudinal side of grid, and means for moving said main part in a predetermined rectilinear direction, said at least one longitudinal side of said main part extending parallel to said direction so that said opposite sides of said cells are inclined to said direction of movement at one of said Mattsson angles.

[Add the follow new claims:]

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43. A cellular X-ray grid according to Claim 29, wherein said main part is composed of a low x-ray absorbing material.

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44. A cellular X-ray grid comprising a main part having two opposite end surfaces and a peripheral surface and provided with a plurality of X-ray transmissive cells filled with gas or vacuum, said cells extending through said main part from one of said end surface to another of said end surface and separated by a plurality of X-ray absorbing partitions each having side surfaces facing a respective one of said cells and also each have two opposite end surfaces.